

# W5YI

America's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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### In This Issue...

Conversion to Digital TV Going Very Slow  
"Broadcasters Have Broken Their Promise"  
Top Cable Companies Agree to Add HDTV  
FCC Forum Remarks at Dayton HamVention  
FCC Amateur Radio Enforcement Action  
FCC No Longer Needs Birth Dates on Forms  
Redesigning and Rebuilding Human Beings  
EchoStar Wants to Buy DirecTV DBS Service  
PC Sales "Sluggish," Dell Still Sales Leader  
Combination FRS-GMRS-GPS 2-Way Radio  
Research: Trouble on the Horizon for AOL  
Court Orders Spying on PVR Customers  
FCC Considering New Cable Modem Tax  
German Ham Society: Retain Code Testing  
DVDs Revolutionize Movie Rental Business

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## Congressman Slams Broadcasters on Conversion to Digital TV

The transition to digital high definition television is not going well. At the urging of the *National Association of Broadcasters*, six years ago Congress mandated that all of the nation's 1200-plus TV stations were to begin digital television broadcasting by May 1, 2002. They called the switch to high-definition television (HDTV) the most important consumer-electronic advance since TVs moved to color a half a century ago. (CBS debuted the first commercial color telecast on June 25, 1951.)

Since the traditional (NTSC) format is so different, Congress gave each television station another new 6 MHz channel further up the video spectrum on which to broadcast digital. The plan was that, in 2006, each would return their analog channel to the FCC for auctioning leaving the nation with only high quality digital six channel surround-sound audio and high definition video. The May 1<sup>st</sup> date was not a "target," it was a "cast-in-stone drop-dead deadline" that Congress and the broadcast industry together had agreed on.

Well, as I write this, it is early May and most television stations still only broadcast their old ana-

log signal. And the finger-pointing has begun. Everyone involved is blaming someone else -- especially the American public -- as to why it did not happen. The "industry" is essentially made up of three segments ...the broadcasters (which includes cable

and satellite TV), the content providers and the equipment makers.

Our economy is based on supply-and-demand. Without "demand" nothing happens. The average American spends his evening watching TV and many in the industry now say that consumers are content with "plain TV." The fact of the matter is that "industry" has done little to

promote the transition among the nation's 100 million TV households.

Each faction instead is waiting for the other to get it going. But there can be no doubt as to which is to blame. It was the NAB and the broadcaster who wanted digital television and agreed to get it going ...to provide the platform on which the transition would ride. With no platform, few content providers have been motivated to push ahead with HDTV programming. And with little programming, more than ninety percent of all new televisions sold

"During a 1998 Commerce Committee hearing on the DTV transition I stated that, 'I would not suggest that the government now ought to step in and immerse itself in micromanaging every bit and piece of this process. Government is not very good at that.' While I still believe that government is not good at micromanaging the marketplace, I believe that the hour may be nearing when the government should step in and find solutions to the mess we helped create. More importantly, I believe that Congress has a duty to protect the taxpayers of this country and reclaim the spectrum so that it may be put into its best use."

...Sen. John McCain, delivered May 1, 2002.



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #2

June 1, 2002

are still standard color sets.

Most major TV markets do have some digital stations broadcasting in HDTV and where they are, high-end DTV sets are selling. An HDTV set has ten times more pixels (picture elements) than a standard TV resulting in movie theater resolution. But they cost more than twice as much as regular models. Digital set sellers universally agree that the lack of programming seriously inhibits their sales.

The Government was supposed to reap billions for the U.S. treasury when the returned analog TV spectrum was sold. That won't happen as planned and regulators are furious with TV broadcasters. FCC Michael Powell has been encouraging program sources to mount a voluntary effort to ignite the HDTV revolution. But the main culprit still remains the limited number of digital TV stations and television sets that can accommodate the signals.

## "Broadcasters have broken their promise."

On May 1<sup>st</sup>, the deadline date for DTV transition, Senator John McCain (R-AZ), Ranking Republican of the Committee on Commerce, Science, and Transportation, gave a stinging reprimand to the nation's telecasters from the floor of the U.S. Senate.

He said May 1<sup>st</sup> is significant in U.S. technological history. He mentioned many accomplishments on that day including "On May 1, 1844, Samuel Morse sent the first telegraphic message. May 1, 2002, was supposed to be a wonderful day that represented another technological milestone for American television viewers.

"Unfortunately for consumers, a vast majority of broadcasters have missed the deadline, leaving consumers' digital TV tuners with little more than static. According to recent figures from the FCC and the *National Association of Broadcasters*, over 1011 or 77% of commercial broadcasters have failed to meet the May 1 deadline."

He said "The transition to digital television has been a grave disappointment for American consumers and nothing short of a spectrum heist for American taxpayers.

"The broadcasters have not only missed the deadline, but they have broken their promise to Congress and American consumers. In testimony before the Commerce Committee in 1997, the NAB stated, 'We agreed to an aggressive rollout for this new technology . . . Broadcasters have made a compact with Congress concerning high definition television. We will meet our commitments.'

"...it is clear that three quarters of those broadcasters have not met their commitments, and their failure to do so is slowing the transition to digital television. A slow transition affects Americans not only as consumers, but also as taxpayers. Broadcasters were given \$70 billion in spectrum to facilitate the transition on the condition that they return it when the transition is complete. By failing to meet today's deadline, broadcasters continue to squat on the taxpayers' valuable resource.

"I believe that broadcasters, as beneficiaries of this

Great American Spectrum Rip-off, bear heightened responsibility for facilitating the DTV transition. I recognize, however, that even if the broadcasters were to meet their commitments, the transition would not necessarily be complete. Digital broadcasts are one cylinder of the engine needed to drive the transition. Many other issues still remain unsolved and I do not underestimate the amount of work that needs to be done. Michael Powell, Chairman of the FCC, has also recognized this. In what I believe is a step in the right direction, Chairman Powell has advanced a proposal that incorporates provisions for all of the industries involved with the DTV transition and asks for voluntary cooperation to accelerate the transition.

"Chairman Powell has called for the top four networks to provide DTV programming during at least 50% of their prime-time schedule beginning in the 2002-2003 season, and asked DTV affiliates of the top four networks in major markets to obtain and install the equipment necessary to broadcast a digital signal and inform viewers that digital content is being broadcast. The proposal also calls on cable operators with 750 MHz systems or higher to offer to carry, at no cost, the signals of up to five broadcast or other digital programming services. Additionally, the proposal asks the Direct Broadcast Satellite industry to carry the signals of up to five digital programming services that are providing DTV programming during at least 50% of their prime-time schedule.

Finally, the proposal calls on the equipment manufacturers to include over-the-air DTV tuners in new broadcast television receivers between 2004 and 2006. I understand that certain industry representatives, including certain broadcast networks and the cable industry have expressed a general willingness to answer Chairman Powell's call. I think this is also a step in the right direction. I am hopeful that these commitments will lead to results.

"Make no mistake, I continue to be a firm believer in market forces, which is why I believe that this voluntary proposal is an appropriate step at this time. We must be mindful, however, that valuable public resources are at stake here. Should the transition continue to be delayed, alternative measures will need to be taken in order to reclaim the spectrum for which so many other productive uses can be found and which rightfully belongs to the American taxpayers.

"I believe therefore, that Congress needs to be prepared to intervene, if necessary, to protect the taxpayers of this country. If significant progress isn't made in the DTV transition, then I will introduce legislation that will not be voluntary. Codifying Chairman Powell's voluntary proposal may be the mildest measure we should consider."

"Let me emphasize the importance of this point. Significant progress needs to be made on the DTV transition. If progress continues to stall, then perhaps a more aggressive approach such as reclaiming the spectrum from the broadcasters beginning January 1, 2007, will be required."



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #3

June 1, 2002

## NAB's FRITTS SAYS "BROADCASTERS NOT TO BLAME"

Edward O. Fritts, president and CEO of the *National Association of Broadcasters* says the NAB "...embraces the Powell plan" and urges the cable and consumer-electronics industries to do likewise.

Fritts contends over-the-air broadcasters are indeed airing digital television "...ushering in an era of broadcast television with unparalleled picture and sound quality for viewers." He blames "monopoly cable companies [who] have thwarted the digital efforts of broadcasters across America by instead delivering a 'digital cable tier' of high-priced cable-only networks to the exclusion of free over-the-air digital broadcasts."

He also faults "...the lack of 'digital television sets' on the market [which] do not allow consumers access to local over-the-air digital stations. Instead, most receivers sold as 'DTV sets' merely allow consumers access to current 'analog' broadcasts as well as video discs."

"The DTV transition is far too important for viewers to permit further delay," Fritts said in a widely-distributed May 1<sup>st</sup> press release. He added that the NAB was "...proud that hundreds of local stations have met today's digital deadline and that hundreds more will be on the air within six months. We're also pleased that Congress' General Accounting Office has found that 113 of 119 network-affiliated stations in the top 30 U.S. markets are already broadcasting in digital."

"The gravitational pull to digital television is inevitable," Fritts said. "Now is the time for cable operators and TV-set manufacturers to do their part to deliver on the DTV promise. We look forward to the day when cable operators carry all digital broadcast signals in their entirety."

Both HBO and Showtime are already delivering HD-TV programming. But so far, only DBS (direct broadcast satellite) programmers have it available nationwide.

## **Top ten cable firms agree to add HDTV by year end**

Right on the heels of the NAB press release was a May 2<sup>nd</sup> announcement by the *National Cable & Telecommunications Association*. Like the NAB, NCTA disavows any responsibility for the HDTV disaster. Their version is that "The cable industry has been a leader in offering consumers new and unique digital services." And they brag about the more than 20 percent of all cable customers that have chosen to subscribe to digital cable services. NCTA argues that cable simply can't carry both the analog and digital channel of every local station.

Digital set-top boxes exist today which allow cable operators to provide digital broadcast signals, including HD programming, to consumers. NCTA disclosed that the nation's top 10 cable operators have now pledged to add by January 1 of next year as many as five local broadcasters or cable networks to their lineup that air significant amounts of HDTV high-definition programming.

## FCC REMARKS AT 2002 DAYTON HAMVENTION

I am writing this newsletter just before leaving for the 2002 Dayton HamVention. FCC staffer William T. Cross, W3TN of the Policy and Rules Branch of the Public Safety and Private Wireless Division was kind enough to send me an advance copy of the talk he will be giving on Saturday morning, May 16. Bill, the contact person in the Wireless Telecommunications Bureau for amateur radio, is responsible for is the amateur radio regulatory program.

"The Policy and Rules Branch handles the day-to-day administration of the amateur service and some of the rule making activities that effect the amateur radio service.

"The other branch of the division that also works a lot with the amateur service is the Licensing and Technical Analysis Branch in Gettysburg PA. It handles most of your applications and other license matters.

"...we have reached a point in time when a lot of petitions that may affect the amateur service are pending, but not a lot has actually happened with them. Mostly, I'm going to update you on requests that the Commission has received from you and your organizations. I'll tell you upfront I don't have any big decisions to announce -- no new bands, no new examination system, no new call sign formats, or license classes.

"One of the common misconceptions in amateur radio that I run into is that the FCC is at the center of amateur radio. Nothing could be further from the truth. The FCC's involvement in ham radio is pretty minimal -- we keep a licensing database and make some database entries, print and mail you a piece of paper, and we are the keeper of the rules. We also answer your questions. And we have been charged by Congress with being the manager of the non-government radio spectrum.

"I also want to dispel the notion that the Public Safety and Private Wireless Division is the only unit in the Commission that has an impact on the amateur service. Nothing could be further from the truth. The amateur service is affected by the Office of Engineering and Technology, the International Bureau, which is involved with World Radio Conferences such as the one that will occur in Caracas next year, and the Office of the Managing Director. These Bureaus and Offices are going to have a great impact on the amateur service over the next few years -- maybe even a greater impact than the Wireless Bureau.

"As you may recall over a year ago, our country elected a new president -- President Bush. Commissioner Michael K. Powell was asked to become the new Chairman. Three other commissioners also have been confirmed since President Bush was elected. There is still one vacancy on the Commission.

"The FCC, under Chairman Powell, has focused on agency organization, enforcement and spectrum management. The Commission recently completed a reorganization. It combined cable, broadcasting and satellite TV



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #4

June 1, 2002

regulation in one bureau, the Media Bureau, instead of 3 separate bureaus. There were numerous other changes, too. The Common Carrier Bureau, for example, became the Wireline Competition Bureau. As best as I can tell, none of the organizational changes will have a great effect ham radio's regulatory future.

"I plan to talk about petitions for rule making that are pending at the Commission and that may effect the amateur service in the future. These petitions seem to be coming from two sources: one is allocation petitions that have been filed with our Office of Engineering and Technology. Some of these petitions come from the amateur radio community.

Others come from companies and others that want to use or expand their use of the radio spectrum. Many of the petitions ask for authorization to use spectrum that the amateur service already has been allocated. There seems to be a never-ending stream of applications from non-amateur sources that claim they could make better use of your spectrum.

"The other source of requested rule changes is the results that have come from WT Docket No. 98-143, the Amateur Service Biennial Review proceeding that became effective in April, 2000. This is the proceeding that simplified and streamlined the amateur service operator license requirements and structure.

"As an aside, how you all have responded to the simplified license structure has been pretty amazing. The change in the number of licensees in each license class are on the slide. They show how you have responded. Here are the numbers:

Class	Jan. 2000	Mar. 31, 2002
Amateur Extra	75985	97812
Advanced	103048	86372
General	119787	138374
Tech and Tech+	338334	317854
Novice	50630	39930
Grand Total	677784	680342

"The Amateur Extra Class has gained almost 22,000 licensees since restructuring was announced, and the General Class is up almost 20,000 licensees. The combined Technician and Tech+ Class is down 20,500 licensees. Advanced, and Novice have lost 27,000 licensees. Many of those "lost" really are licensees who upgraded, so they are not a "loss" to amateur radio.

"With regard to the Novice Class, there were 93,634 Novices in 1991 according to the Callbook. We are down to less than 40,000 Novices now. And the number of Novice Class licensees is falling by about 4,000 per year.

"The data also shows that overall, we aren't attracting many new people into ham radio. Growth over the 2-year period was about 1/4 of 1% per year.

Office of Engineering & Technology petitions

## RM-9404 Low Frequency allocation petition

"This petition is from the ARRL. It was filed on October 22, 1998, and requests two new domestic secondary allocations for the amateur service- 135.7-137.8 kHz and 160-190 kHz. 135 kHz would be your (approximately) 2222 meter band; 160-190 kHz would be your 1700 meter band. Half wavelength dipoles will be very long-between 2,570' and 3,300'. That's only 1/2 to 5/8 of a mile. If you are land-limited, a quarter wave vertical may be a bit more practical-1285' to 1650' -- as are loops. I figured out that once around the perimeter of a 2 acre lot would be a 1/4 wavelength at 175 kHz. 4 times around -- there's your full wavelength loop.

"Currently amateur radio operators and Part 15 experimenters in the U.S. are using the 160-190 kHz band pursuant to Section 15.217 of our Rules. Amateur radio operators would be able to conduct antenna design and construction experiments, and long range propagation studies. The ARRL has requested that output power would be limited to 200 W peak envelope power, and 2 W effective isotropic radiated power. CW, RTTY, data, single-side band and image emission types are requested and the bands would be available to General, Advanced, Or Amateur Extra Class licensees.

"Thirty-two parties filed comments. Comments from amateur operators generally support the petition.

"Opposition is coming from companies that manufacture radio frequency identification equipment which operates at 121-134.2 kHz, and power line carrier operators in these bands.

## RM-10209, requests an allocation at 5250-5400 kHz.

"...Filed by ARRL on July 24, 2001, The band is primarily used now by the U.S. Government for ship-to-shore and fixed point-to-point communications.

"The premise of the request is that there is a current need for 150 kilohertz of usable spectrum around 5 MHz for the amateur service, and that this allocation is needed to fill the propagation gap between the 80 and 40 meter bands.

"Eighty-seven parties filed comments on this petition; eighty-five of which support the request. Power limits are an issue in the comments -- one commenter does not support the use of 1500 Watts PEP because of the cost of buying an amplifier, another comments suggests 200 or 250 watts be authorized. Another issue is whether we should establish in the rules a CW-phone or narrowband-wideband band plan like you have on other HF bands. ARRL requested that we allow all emission types to use the entire band and leave band planning up to you.

## RM-9949 Use Of 2400-2402 MHz Band by the Amateur and Amateur-Satellite Services

"ARRL filed this petition on July 17, 2000. It requests that we amend our Rules to upgrade the domestic



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #5

June 1, 2002

allocation of the amateur radio service in the 2400-2402 MHz band from secondary status to primary status. It also requests a primary allocation for the amateur-satellite service to protect your operations from reallocation or use by an incompatible sharing partner. This band is used for both analog and digital satellite uplink and downlink operations.

"Four parties, including AMSAT, filed comments on the petition. All the comments support this request. AMSAT says that two of the Phase 3D satellite transmitters are in the band 2400-2402 MHz, as is one of its receivers.

"OET has another rulemaking proceedings that also may effect you. This is RM-10288, a petition from Loea Communications Corp. that may effect your 75.5-76.0 GHz band. You all have a legacy allocation to this frequency segment until 2006.

## Office of Managing Director

"There is one Notice outstanding that may effect you. The Office of Managing Director has released its annual Notice of Proposed Rulemaking on fees. It proposes to increase slightly the fees for vanity call sign applications. It proposed to increase the fee for these applications to \$14.50. If adopted, the new fee would become applicable when the new fee schedule becomes effective. The fee you pay is based on the date your application is filed with the Commission, not the date you mailed it, gave it to Fed Ex, or told Fed Ex to deliver it. I'm sure your newsletters will report any fee change.

"Speaking of vanity call signs, would anyone care to guess how many vanity call signs applications have been filed with the FCC since the vanity call sign system started in June, 1996? The answer is: 60,188 as of the end of April.

"How many vanity apps do you think we received in calendar year 2001? Answer: 8,387

"How many vanity call sign requests have been granted? Answer: 46,026. 44,000 of these are still in the database today.

## Wireless Telecommunication Bureau petitions.

"OET isn't the only part of the FCC busy with amateur radio-related rulemaking activities. The Wireless Bureau has 7 petitions for rulemaking that you have filed. Most of them address operating privileges, specifically the frequency bands for the different classes of licensees, or what you can do on different frequency bands.

**"RM-10313 from Kenwood Communications Corporation** came in first. It asks that Section 97.201 be amended to allow auxiliary stations to transmit on the 2 M band above 144.5 MHz, except 145.8-146.0 MHz, which it says is for amateur satellite operations. Currently, auxiliary stations are restricted to channels above 222.150 MHz.

"Kenwood has requested these changes so its Sky

Command system can be used legally under the Amateur Radio Service Rules. This system is built into the TS-2000 transceiver and from what I've heard, unofficially of course, it works just fine.

**"A second petition, RM-10355, is from the NASA John Glenn research Center ARC in Cleveland.** It wants us to amend Section 97.113, the Prohibited transmissions rule, to allow re-transmission of a message between any manned spacecraft and its associated Earth stations. Currently only message between a space shuttle and its Earth stations can be re-transmitted. Messages between the international Space Station and its Earth stations can not be re-transmitted under the present rules. The ISS did not exist when a space shuttle was added to the exceptions list. This amendment would add another exception to the "no re-transmitting signals from other stations" rule.

**"The third petition is from The Quarter Century Wireless Association.** It requests that we amend the rules for the vanity call sign system. It wants a licensee, while he or she is living, to be able to designate a specific amateur radio club as the entity they desire to acquire their call signs in memoriam. The current rule allows any of your relatives, including ones you do not like or know, to decide which club gets your call sign when you pass away. But you can't do this before you die, and you shouldn't do this after you die. This is RM-10353.

**"Another petition that we have received concerns establishing phone and CW segments on the 160 M band.** This one is from Jeffery Briggs, K1ZM, and William Tippet, W4ZV. These gentlemen identify themselves as long-time 160 M operators. The petition is RM-10352. Their argument is that because the newly-revised ARRL 160 M band plan is voluntary it also is unenforceable. They are concerned that some operators will choose to ignore it and, therefore, it will be ineffective in maintaining a separation of narrowband modes below 1843 kHz and wideband modes above 1843 kHz.

They want to restrict wideband modes, which they identify as SSB, AM, and SSTV to channels above 1843 kHz. Narrowband modes, CW and digital, would be able to be transmitted on any channel in the 160 M band. Essentially, this proposal is asking for us to establish by rule a segment of the band where phone emissions are not allowed, just as every other band 80M-2M has. Last time I looked, we had received over 500 comments on this petition. Most of them seemed supportive of the request, although not all of them.

"A pragmatic result of this request, if it ends up in the rules, would be that when working DX and during phone contests, FCC licensees could not transmit SSB below 1843 kHz. Foreign stations, however, could transmit SSB below 1843 because our rules don't apply to them. So for phone, you get a classic split frequency situation setup, just like you have with Europe, Africa and Asia on 40



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #6

June 1, 2002

meters, except that stations in those areas would have the option of going transceive above 1843. Whether this is desirable is up to you.

"In contrast, during CW contests, CW could be transmitted above 1843 kHz, just as it can be now, because the rules allow CW to be transmitted on any frequency authorized to the control operator. So stations that want to transmit phone during a CW DX or contest event receive no apparent benefit from this rule change, but stations that want to operate CW during a DX or phone contest event have a protected-by-rule 43 kHz segment to operate in (except for QRM from Canadian and other foreign stations).

"Another consequence of this rule is that it would create a de facto 43 kHz DX-to-DX window that foreign stations could use in contests to work each other, but you couldn't work them. Again, while this is like other bands where there are segments that you can't transmit phone in, whether this is desirable is up to you.

**"This petition, RM-10354, is from John S. Rippey, W3ULS.** He believes the public interest is served by having a growing number of amateur radio licensees, including amateurs who are proficient in Morse code, and that the Novice and Tech Plus Class of licenses have value. He wants us to amend the rules so that Novice Class and Tech Plus licensees receive additional CW privileges on all HF bands except 20 Meters and new phone privileges on 17 and 12 meters.

**"ARRL petition, RM-10413 is a petition for rule making from the ARRL.** It, too, addresses operating privileges, but for all classes of licensees. The premise of the petition is that Novice class and Technician-Plus class segments of the HF allocations are not now heavily used while other segments of the Amateur HF allocations are severely overcrowded (especially in the SSB segments). The ARRL says we can improve the use of existing frequency allocations and generally allow more flexibility in Amateur Radio operations.

"ARRL also points out that substantial advancements in the use of digital techniques in the HF bands, (such as the extremely popular PSK-31) have occurred. It says that a HF re-farming plan for the underutilized Novice HF subbands cannot wait any longer.

"ARRL says that operating privileges should not be decreased for any licensee, future options must include spectrum for telegraphy for Novice and Technician-Plus licensees in addition to the telephony and digital privileges already available to them in the 10-meter band.

"ARRL requests that in the 80, 40, and 15-meter bands, Novice and Technician-Plus telegraphy restrictions be changed to match those of General Class telegraphy/RTTY/Data band segments, but that Novice and Technician Plus licensees may only use telegraphy with a maximum power of 200 watts in those band segments. It also

says there is substantial support for expansion of the telephony subbands due to the significant overcrowding in these subbands.

"This petition follows up on our December 30, 1999, decision that substantially simplified the Amateur Service licensing structure and postponed consideration of revised operating privileges until some experience with the new license structure was obtained. ARRL proposes for the different bands:

## **80 meters phone, image, cw:**

General Class	3800 to 4000 kHz
Advanced Class	3750 to 4000 kHz
Extra Class	3725 to 4000 kHz

## **40 Meters phone, image, cw:**

General Class	7175-7300 kHz
Advanced/Extra Class	7125-7300 kHz

## **15 meters phone, image, cw:**

General Class	21.275 to 21.450 MHz
Advanced Class	21.225 to 21.450 MHz
Extra Class	21.200 to 21.450 MHz

## **10 meters:**

No change to the telephony (wideband) segment. Novice and Technician-Plus licensees permitted telegraphy, RTTY and data in the entire 28.0-28.3 MHz segment.

"The petition also requests other rule changes. ARRL requests we allow Spread Spectrum emissions at 222-225 MHz subject to each of the restrictions applicable to SS in other Amateur allocations.

"It requests we clarify that identification of repeaters using a MCW emission is permitted. And it requests we amend the Special Event Call Sign System established for commemorating a special event.

"ARRL points out that special event call signs, commonly referred to as "1 X 1" call signs, do not denote the location of the station. It asks that additional blocks of call signs, specifically the 2 X 1 call sign blocks for territories and possessions which have no specified mailing address, be made available to the special event call sign system. Examples of these call sign blocks include those reserved for Kingman Reef, Baker and Howland Islands, Palmyra, Navassa, Desecheo, Johnston, and Wake Islands, and other places.

"Lastly, ARRL requests that a 1990 waiver concerning the 33 cm Band in Colorado and Wyoming be incorporated in the rules.

"This petition is out for comment now. Comments were due May 17, reply comments are due in early June. There were almost 90 comments filed by May 1. I have not looked at them yet.

**"The last petition is RM-10412. It is from**



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #7

June 1, 2002

**Nickolaus Leggett, N3NL.** He requests that we mandate specific equipment design requirements so that all commercially-built amateur radio equipment is field-repairable in some manner.

"As examples of specific equipment design requirements we could mandate, Mr. Leggett suggests:

- Field replaceable circuit boards
- Minimum component spacing on circuit boards
- LED displays of bus signals
- Removable ICs mounted in sockets
- Chassis with access doors
- Availability of service manuals for equipment

Reply comments on this petition are also due in early June.

"In addition to these petitions, there are a number of rule changes that need to be made as a result of ITU agreements and questions that have been asked that indicate some rules are less than clear or that they are in the wrong place in Part 97.

## The Future...

"There's a lot coming down the pike that you need to watch and know about.

"First, there will be Commission items such as notices of proposed rule makings that will address the petitions I talked about. I expect that you will see some of them coming out before the end of the year.

"Second, a conference that may have a huge future impact on amateur radio is WRC 2003. This is scheduled for June, 2003, probably in Caracas, Venezuela. WRC-03 is going to take a top-to-bottom look at Article S25. This article includes some of the international rules that apply to ham radio. Most groups have accepted that suppression of the Morse code proficiency requirement in Article S25 is likely to occur at WRC 2003. That would leave a Morse code proficiency requirement as a domestic option for each country to decide whether to retain.

"Other changes that may be considered concern harmonization of a world allocation for ham radio around 7 MHz and call sign formation (all of these call signs that have multiple numerals in them like we had for the Olympic Games in Atlanta are not quite in harmony with the Radio Regs). Other questions concern whether the ITU should get rid of the prohibition on third party communications and the banned country rule. There is a lot more to WRC-03 than just S25.5, the telegraphy requirement for operation below 30 MHz, but that seems to be causing most of the smoke.

"Keep in mind, too, that WRC-03 changes may not become effective for many years. The 7 MHz issue, for example, may not translate into what you don't hear or what you can do on the air for 5-10 years, at a minimum.

"Lastly, keep your eye on legislation that has been introduced on Capital Hill. I read that a bill has been introduced that may help you with antenna issues."

## FCC AMATEUR RADIO ENFORCEMENT ACTION

Six Georgia radioamateurs have had their Amateur Radio privileges dropped to "No Code" Technician. The FCC action stems from license testing "irregularities" discovered by the ARRL-VEC in both written and Morse code examinations administered at a testing session on May 27, 2000 in Statesboro, Georgia.

The ARRL had forwarded documents from the testing session to the FCC for review and any necessary enforcement action. The FCC agreed that "These documents, together with other information the Commission has received, indicate alarming discrepancies in testing procedures." In addition to using examination question sets and Morse text identical to those used at several recent exam sessions, "...it appears that the test candidates had been shown, or had access to, the Morse code answer key for the examination administered."

The Commission conducted their investigation last year when a total of eleven VE's were asked to answer several probing questions concerning the testing procedures used at the test session.

Earlier this year, applicants from that session were ordered to re-take the Amateur "Element 1" 5-wpm Morse code examination on-or-before April 15, 2002. They were notified that their Amateur Radio license class would be reduced if they failed to appear for re-examination within the three month period.

The FCC made it clear that it was the VE team and not the applicants who were guilty of the improper testing procedures. In April 30<sup>th</sup> letters to all six radioamateurs, the FCC said that the necessity to retest was "...in no way a reflection upon you or your qualifications to be an Amateur licensee."

The following radio amateurs did not appear to be readministered the code test and their license privileges have now been modified to those of a "No Code" Technician licensee:

- Eugene Walker, Jr., KG4HHT (General), Baxley, GA
- James W. Brannen, KG4HSI (General), Claxton, GA
- Roxanne T. Brannen, KG4HSH (General), Claxton, GA
- Thomas F. Evans, KF4YLF (General), Sylvania, GA
- Larry D. Hagan, KG4IHE (General), Hagan, GA
- Joyce B. Martin, KG4EX (Extra), Claxton, GA

## FCC NOW SAYS IT DOESN'T NEED YOUR DATE OF BIRTH

The on-again, off-again, on-again requirement that radioamateurs supply their date-of-birth on applications is now off-again. The Commission dropped the birthdate requirement a few years ago when applicants complained that the date was being made public knowledge as part of all online Amateur databases. Last year, the Commission said the information was again needed but the information would not be made public. The VECs rushed to revise their forms to request birth dates. Now, for some unknown reason, it says it no longer needs the information.



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #8

June 1, 2002

## CUTTING EDGE TECHNOLOGY

**Redesigning and rebuilding humans, a new era in medicine.** Research work in biotechnology (especially the manipulation of DNA molecules) and nanotechnology (the manipulation of matter at the atomic level) are yielding the secret of life. Bionanotechnology is the melding of biology and nanotechnology.

All living organisms are composed of cells that contain the molecule DNA. One of the great scientific discoveries of biotechnology is that DNA from any organism will function if it is transferred into any other organism ...genetic engineering.

Physicians aim to make tissues healthy, but with drugs and surgery they can only encourage tissues to repair themselves. It soon will be possible to compile complete, molecular-level descriptions of healthy tissue.

"By 2030, nano-electromechanical systems combining computational power and the ability to manipulate matter at the molecular level will be common." Implanted medical "nanorobots" will enter living cells to perform direct biological repairs ...building or rebuilding every molecule found in a cell. More at: <[www.foresight.org](http://www.foresight.org)>, <[www.zyvex.com](http://www.zyvex.com)> and <[www.imm.org](http://www.imm.org)> ...the website of the Institute for Molecular Manufacturing.

## EMERGING COMMUNICATIONS

**Echostar wants to buy DirecTV for \$26 billion.** The FCC is trying to determine if consolidation of the nation's two Direct Broadcast Satellite (DBS) companies into one is in the public interest. EchoStar operates the Dish Network, which has 6.8 million subscribers nationwide. Hughes, a subsidiary of General Motors, provides DirecTV service to 10.5 million customers.

At present, cable TV companies presently control more than 80 percent of the U.S. pay television market compared to 17 percent for DBS. The satellite companies say the merger will benefit consumers through more competition to cable TV.

Satellites can reach every corner of America and the satellite operators believe broadband and local TV channels via satellite is the best solution for bringing high speed Internet access and television to rural Americans.

The merger has the potential to bridge the so-called "digital divide" between urban and rural residents. Today, high speed Internet access is mostly unavailable and unaffordable in rural areas.

DISH Network and DirecTV each transmit a total of more than 500 identical channels. They believe consumers will benefit from the massive increase in Direct Broadcast Satellite (DBS) satellite capacity that will result from the elimination of duplicative programming. The combined company will operate under the EchoStar name.

Opponents of the Hughes/DirecTV - Echostar/Dish Network merger - which includes many Congressional leaders, state attorneys general, cable operators and broadcasters - say the merger would create an unacceptable monopoly in rural America where cable systems are not as prevalent ...or do not exist at all.

When combined, the merged companies would control all of the satellite TV broadcasting slots covering the continental United States. By 2004, there will be nearly 25 million DBS video subscribers. They believe, monopolies on that scale will "...result in higher prices, less innovation and lower quality service."

The DBS companies, however, say they are committed to a "One Nation, One Rate Card" approach regardless of a subscriber's location. Furthermore, new set-top boxes and satellite dishes will be made available to all who may need them at no cost in order to receive their local channels.

The Dept. of Justice is examining whether the proposed merger violates anti-trust laws. Echostar says they plan to provide local programming service to all U.S. markets. Right now, there is only satellite capacity to provide local TV channels to major cities.

**A new (and novel) combination "Dish Network-DirecTV" satellite antenna** was shown at a recent satellite dealers trade show held at the Coronado Springs Disney Resort, Orlando, FL, April 16-20, 2002.

It actually contained two dishes. A smaller dish was positioned in front of the larger 18-inch dish. Three separate feeds installed under the larger dish (for the 101, 110 and 119 WL satellites) were aimed at the smaller dish which transmitted them zig-zag style to the 18-inch dish.

The antenna, which contained both the Dish Network and DirecTV logos, is intended for use when (and if) the Echo-

star-DirecTV merger is approved.

**More than half a million Canadians are tapping into U.S. direct broadcast satellite (DBS) signals.**

The Canadian Cable Television Association (CCTA) estimates that the figure is closer to 700,000.

A recent Canadian Supreme Court decision now holds that it is against Canadian law to sell or use unauthorized satellite systems. The president of Bell Express-Vu, Canada's satellite television broadcaster with one million subscribers hailed the decision as "...a tremendous victory for Canadian broadcasting."

Canadians obtain the unauthorized U.S. (DirecTV or Dish) satellite network feed via the black and grey satellite markets. Black market reception is the unauthorized (stolen) decoding of encrypted programming signals. Black Market equipment providers typically charge a single fee for the equipment and access card insinuating that programming received by the user is "free."

"Grey market" reception is when a Canadian resident lies to their U.S. direct-to-home equipment or programming supplier about where they live. They simply give a false U.S. mailing address.

## COMPUTERS & SOFTWARE

**PC sales "sluggish" after years of double-digit growth.** Market researcher Gartner Dataquest said 11.1 million units were shipped during the first quarter, up 2.3 percent. International Data Corp. reported 10.6 million PCs being sold, down 0.4 percent. The top five computer makers each retained their position with Dell followed by Compaq, Hewlett-Packard, Gateway and IBM.

Biggest loser was Gateway with a huge loss in market share ...now standing at 6 percent. Gateway shipped 581,000 units. IDC said Dell continues to expand its business with a 19.4 percent sales gain over the first quarter of 2001. It has a 28.4 percent market share.

Worldwide, more than 30 million PCs were shipped in the first quarter with the U.S. accounting for one-third of the market. Compaq is being acquired by Hewlett-Packard and the combined worldwide sales of Compaq/HP will be larger than Dell.

**Researcher Jupiter Media Metrix says that 16 percent of U.S. online households (10.4 million)**



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #9

June 1, 2002

now have high-speed access and that another 24% are considering signing up in the next 12 months. "Broadband connectivity will soon be the rule, not the exception."

## GADGETS & GIZMOS

**G**armin International, Inc (Olathe, KS) has a new hand-held two-way radio that operates both on the Family Radio Service (FRS) and General Mobile Radio Service (GMRS.) The "Rino-110" includes a built-in clock, stopwatch, alarm, is water-proof and allows users to track their position to an accuracy of 10 feet or less using "advanced GPS." A new patented feature called "Peer-to-Peer Positioning" lets users send their exact position to friends who see you on their map along with the direction and distance they should travel to get to you. Cost: about \$200. Additional information at: <www.garmin.com/outdoor/rino/>

## INTERNET & WORLD WIDE WEB

**T**rouble on the horizon for American Online (AOL). Forrester Research (Cambridge, MA) analyzes the future of technology change and its impact on businesses, consumers, and society.

They recently released a summary of research they did on the future of AOL. Bottom line, it contends that the decline of online advertising and America's shift to high speed broadband threatens the company.

Forrester reports that dial-up Internet access growth is slowing. For example, AOL acquired 300,000 less new subscribers last year than in 2000. There were 53 million dial-up households at the end of last year. Forrester predicts this will shrink to 34 million in 2006 as broadband displaces dial-up accounts.

In 2004, both cable operators and phone companies will offer what Forrester terms a potential "dial-up killer" ...an always-on 56 Kbps line for \$14.99 monthly. The final blow will come in 2006 when broadband passes 85% of homes, and wireless modems easily exceed 56K.

Forrester said some cable operators plan to offer a \$25-per-month "nearly broadband" service. This is certain to siphon off many of AOL's \$23.95-per-month subscribers, a potential disaster for

AOL since "...subscriber fees make up 75% of AOL's revenues."

About ten percent of AOL users have high-speed access. But most already have a cable or DSL connection. Forrester predicts that new broadband users will resist paying \$14.95 for AOL's content on top of their high speed access bill.

AOL stock has declined more than 40 percent since the beginning of the year.

**A** Commerce Dept. report estimated last year's total online sales at \$32.6 billion (excluding travel.) But still only 1 percent of the all retail sales (estimated at \$3.2 trillion.)

**C**ourt orders electronics manufacturer to spy on its own customers! SonicBlue of Santa Clara, CA, manufacturer of the ReplayTV 4000- series personal video-recorders, is being sued by film and TV content providers.

The lawsuits focus on ReplayTV's "Autoskip" feature which skips over recorded commercials and a high-speed Internet port that allows users to download video from the Internet or to send video to other ReplayTV 4000 owners.

The firm has been ordered by a federal court to turn over information about what digital video recorder users are doing. After SonicBlue said they do not track that information, the judge ordered the company to write software in the next 60 days that would record every "click" from every customer's remote control.

The studios and networks say they need this information to determine how much copyrighted movies and television shows are being stolen. Privacy advocates condemned the ruling, calling it a flagrant invasion of privacy.

Turner Broadcasting System Inc., believes that if personal video recorders are going to allow viewers to zap commercials, consumers should pay for the privilege -- as much as \$250 per year. They say that PVRs installed in set-top boxes could ultimately destroy commercial TV.

**S**tartling fact: Over 85% of all Web traffic is generated as a result of referral from a search engine or a directory.

## WASHINGTON WHISPERS

**A** national government worker card is on the way. The U.S. Government is in the process of standardizing

Federal ID cards and will then turn to smart cards and biometric technologies to improve security at federal buildings. At present, 100 different agencies have 100 different ID cards.

**C**able Modem taxes may be on the way! Leading cable operators are urging federal regulators to refrain from applying new taxes to broadband cable-modem services. The FCC is looking into whether high-speed cable-modem providers should contribute to the Universal Service Fund.

USF is a phone subsidy program (commonly called the "Gore Tax") which is paid by the nation's wireline telephone companies to fund school and library Internet connections and telephone service for the poor. The costs are passed on to consumers via a USF line item on their monthly phone bill.

Unless they provide telephone service, cable companies are exempt from contributing to the USF since they are classified as an information service.

The Commission is concerned that the migration of narrowband dial-up users to broadband cable modem service could adversely impact USF funding.

## AMATEUR RADIO NEWS

**M**ost observers predict that required Morse code testing as a prerequisite for HF ham band operation will be abolished at WRC-2003. It appears that Germany's national ham radio society, the Deutscher Amateur Radio Club, is not giving up on the mandatory Morse code issue.

The DARC has fired off a document to the IARU Region 1 Conference 2002 requesting that the "knowledge level" be retained at the current standard. The triennial conference will be held in San Marino between November 10 and 15.

DARC contends "Morse code is a hurdle which forces an interested candidate to study a bit longer than 10 hours to gain a ham radio license." They also say the IARU "AC Guatemala Resolution needs to be reviewed." and that "Region 1 societies are urged to ask their authorities to keep the Morse code test requirement."

But it is the majority voice of the ITU member countries that counts ....not the various Amateur Radio societies. The German telecom regulator, RegTP/BAPT, is already on record as favoring abolishing the code exam requirement.



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #10

June 1, 2002

## DVDs REVOLUTIONIZING MOVIE RENTAL BUSINESS

Consumers rented videos more often than they went to theaters last year. The increase in video rental activity was driven in part by the unprecedented degree of acceptance for DVD video technology among consumers. In many locations, DVD sales and rentals are outselling the more traditional analog VHS tape videocassette format.

Total DVD rental activity nearly doubled in 2001. Profits are also higher to video rental stores since movie studios don't use 2-tier pricing on DVDs. VHS movie tapes used to be available earlier to renters for which they paid a premium. DVDs are now available to both rental stores and retail consumers at the same time and at the same price ...usually around twenty bucks

### **DVD player price nosedives**

The popularity of DVD players has grown consistently prompting a number of market researchers to predict that DVD shipments will eclipse VCR shipments as early as next year. Some 13 million movie fans bought DVD players last year versus 15 million VCRs. The retail price of DVD players has been dropping dramatically ...some to around \$100. It wasn't long ago that the players were selling for \$500. Nearly 30 million have been sold since its introduction in March 1997.

According to the Consumer Electronics Association (CEA), the average price for VCRs peaked at \$828 in 1981. In number of units sold, VCR sales fell 35 percent last year, and the CEA figures projects the average price of a VCR in 2005 will be \$50. That's 95 percent drop!

The CEA reports there is now a DVD player in one of every four American homes and that it has moved into homes faster than any other consumer electronics product in history. DVD also has become the drive of choice in notebook computers ...especially for bored business travelers on long flights.

DVD's are a much better value for the consumer since they offer far more than video cassettes. DVDs have sharper picture quality which goes well with home theaters and high-definition televisions ...and a greater compatibility with digital and surround sound.

Not only is the video picture sharper and audio more robust, the disks also have room on them for extra features, such as scenes cut from the final movie, closed captions and foreign languages. VCRs will probably be around for only two or three more years, then they go the way of the 8-Track tape, BetaMax and vinyl LP records.

### **No more due dates, no more late fees**

The world's largest online DVD renter to about to get some competition from Blockbuster, the world's largest "walk-in" renter of movie VCR tapes and DVD's. Netflix, Inc. let's you rent as many DVD movies as you want by

paying a monthly subscription fee rather than rent on a per movie basis. You can have up to three movies out at a time for \$19.95 monthly which is automatically charged to your credit card. (Four at a time costs \$24.95, five: \$29.95 ...eight: \$39.95.)

Their attraction is convenience. You can keep the rental movie as long as you want ...there is never a late fee and you never have to rush back and forth to the rental store. DVDs are delivered directly to the subscriber's mailbox by first-class mail. You return them in a provided postage paid mailer. Unlike VCR tapes, DVD's can be mailed for the price of a single first class stamp.

A disadvantage of the privately-held company is their location. They ship all movies from Northern California's bay area and it takes longer for them to arrive at states further away. To combat that, they are getting ready to expand to other locations around the country.

Netflix recently announced that they would be filing for an initial public offering (IPO) of their common stock. In the filing, the Los Gatos-based company disclosed that they lost \$3.6 million, or 59 cents a share, on revenue of \$30.5 million during the quarter ended in March. That compared with a loss of \$20.6 million, or \$4.09 a share, on revenue of \$17.1 million the same time last year. A big improvement, indeed. It got Blockbuster's attention.

Publicly, Dallas-based Blockbuster states more people would rent movies if they didn't have to return the movies quickly or pay a late fee. Privately, they are troubled about the enormous popularity of Netflix which claims to have more than 600,000 subscribers ...and that number is expanding quickly. That makes them a \$150 million company if each customer pays \$19.95 monthly.

According to recent projections by Blockbuster, DVD rentals will outnumber VHS tape rentals by the end of 2003. DVDs already account for 30 percent of their rentals. The Dallas-based company has now announced that it will be testing two new movie rental plans in two cities this summer. They won't say where.

One will be similar in operation and pricing to Netflix. Another will, for perhaps \$50 a year, allow customers to rent up to three or four movies at a time, but keep them as long as they want. The \$3.99 per movie rental fee will still apply.

Blockbuster's press release did not say whether the movies would be mailed or if customers would have to pick them up at their rental outlets. But it is assumed they would be mailed due to the amount of inventory needed.

Launched in 1998, Netflix has a massive library of over 11,500 titles - essentially every DVD ever published. Their huge website at <[www.netflix.com](http://www.netflix.com)> provides background information on DVD releases, including reviews, member reviews and ratings, and personalized movie recommendations. Their recommendations are based on your one-to-five star ratings of recently rented movies.